

U.S. Antarctic Marine Living Resources Program

2013/2014 Weekly Field Reports

Cape Shirreff, Livingston Island

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Spirits are high as opening camp tasks and preliminary science continue apace in stormy weather at the NOAA/AMLR Cape Shirreff field station!

The 2013 Cape Shirreff opening crew arrived in Punta Arenas, Chile on 24 October to begin the 2013/14 field season at the U.S.-AMLR base camp on Livingston Island. Participants are: Kevin Pietrzak, McKenzie Mudge, Michelle Goh, Trevor Joyce and the Expedition Leader, Doug Krause. We departed Punta Arenas for the Antarctic aboard the R/V *Laurence M. Gould* on 27 October at 18:00. Fortunately, a lull between low pressure systems allowed for relatively mild sea conditions while crossing Drake's Passage. We arrived at Cape Shirreff on the evening of Wednesday 30 October.

The ship moved to the Cape Shirreff operations point on Thursday morning 31 October at 05:15, where the conditions were quite favorable. Gear staging began at 06:30 and Zodiacs were launched by 08:00. We spent the next six hours transferring cargo from ship to shore. A group of good-natured, energetic volunteers from the ship assisted on deck and ashore, moving provisions onward to the camp. Two Electronics Technicians from the ship came ashore and helped set up the generator, the VHF and HF radio systems. Just after mid-day swell conditions at the ship increased and all on-shore volunteers were called back to the ship. By that time, however, all NOAA cargo had been transferred to shore. By 15:30 the ship was underway to Palmer Station. The total number of zodiac trips for gear and personnel was estimated at fourteen.

Snow cover for the Cape at arrival was slightly below average for this time of year, although there has been plenty to allow for the sledding of cargo from the boat beach to the camp.

One door cover blew off during the winter, but otherwise, there was no damage to the camp or the emergency hut/bird blind on the north end of the Cape.

Science Report

Seabirds

1. In our first days after arrival, we went out once to the colonies to check on the status of the penguins and we are awaiting better weather to open the bird blind/emergency shelter.
2. The penguin colonies are about 80% covered in snow. Penguins are at attendance at the colonies. Only gentoo penguins are beginning to show courtship behavior. No nest building activity or eggs have been observed yet.



*National Marine Fisheries Service
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3. Brown skuas are reestablishing pair bonds and have been observed in pairs around Cape Shirreff and on territories.
4. Shags have started nesting, with a few seen incubating, but most are still in stages of nest building.

Pinnipeds

5. We conducted our first breeding elephant seal census on 1 November. One bull is maintaining a harem of 21 females on Media Luna Beach. We counted 35 pups, a slight increase over the 21 pups born at Cape Shirreff last year. A preliminary scan of a secondary breeding site on the west side of the Cape that occasionally has breeding elephant seals found no pups on 2 November.
6. We initiated our weekly Cape-wide phocid census on 2 November. We counted 28 adult southern elephant seals and 35 pups. For Weddell seals we counted 9 adults, 2 juveniles, and 3 pups. We also counted 3 crabeater seals. Two of the Weddell pups were observed in close proximity to one female, leading us to speculate on the possibility of Weddell seal twins.
7. Of particular note was the observation on 2 November of two crabeater seals together, exhibiting what we believe is mating behavior in one of the inland valleys here at the Cape. One was a female with bloody bite marks on her neck, the other was unsexed but had blood on its face and was seen biting the female's neck.
8. We have not yet conducted a formal first census of the U.S. AMLR fur seal study site. However, thus far we have not seen any female fur seals and have only observed adult males on territory. We have observed one known-aged tagged adult male fur seal on territory.

Weather

9. Due to a severe storm, which began on the evening of 2 November, we have not yet set up our weather observation system. However, a Kestrel 2500 hand-held weather system has provided some baseline data. To date, winds have been out of the west and northwest, with an average wind speed of 14.9 knots. Max recorded wind speeds were in excess of 50 knots out of the NW. Average temperature to date has been -0.2°C. Sunrise and sunset are at 04:25 and 21:01. For two consecutive days our analog barometer has bottomed out, registering pressures below 28.5 inches of mercury.



Camp

10. The camp opening has gone quite well. As of the afternoon of 1 November, all methods of communication were established (i.e., e-mail, VHF, HF, and Iridium).
11. Communications have been established with Palmer Station, which at the moment is comprised of daily email communications and a weekly check of the HF radio system on Mondays at 09:00.
12. We have not set up our fixed solar array or wind generator, but our gasoline powered generators are operational. One generator had a faulty carburetor, but the other three are functional.
13. Preparations have begun to replace the entire battery bank after the existing one failed during the 2012/13 season. To date 4 of the 12 replacement batteries have been fully super-saturation charged.
14. We are very grateful to the captain, officers and crew of the R/V *Laurence M. Gould* for their support in opening the Cape Shirreff field camp. We extend our deepest appreciation and gratitude to all of the people who helped offload our cargo, especially Eric Hutt (MPC), Jack, Jeremy, Meredith, and McKenzie (MT's), Diane (LT), Danny (Chief Steward) and Mike and Austin (ET's). Eric and his crew did an exceptional job that made this one of the quickest, safest openings in recent memory.
15. Thanks are also extended to the staff of the NOAA Southwest Fisheries Science Center, Antarctic Ecosystem Research Division in La Jolla, California for their support in getting the 2013/14 field season off to a good start, especially in light of the lapse in FY 2014 appropriations that took place immediately preceding our departure. In particular, thanks to Dr. George Watters, Stephanie Sexton, Dr. Mike Goebel, LTJG David Vejar, Jen Walsh, Dr. Jefferson Hinke, and Anthony Cossio.

Presented by Doug Krause and Michelle Goh, with assistance from Kevin Pietrzak, McKenzie Mudge, and Trevor Joyce at the Cape Shirreff Field Camp, Livingston Island, South Shetland Islands, Antarctica

